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ABSTRACT

This module on owning and operating a plumbing business is one of 36 in a series on entrepreneurship. The introduction tells the student what topics will be covered and suggests other modules to read in related occupations. Each unit includes student goals, a case study, and a discussion of the unit subject matter. Learning activities are divided into individual activities, discussion questions, and a group activity. Units (and subject matter) in this module are: planning your business (services, customers, competition; personal qualities; how to compete successfully); choosing a location (customers; competition; personal considerations; selecting a specific location); getting money to start (information needed to get a business loan); being in charge (tasks; choosing workers; keeping people happy); organizing the work (work order; contracts; scheduling; time planning); setting prices (acceptable to customers; in line with competition; components of price; establishing a price); advertising and selling (customer needs; advertising and promotion; selling and customer relations); keeping financial records (importance of financial records; customer billing; daily cash sheet); and keeping your business successful (profit and personal satisfaction; profit/loss statement; how to increase profits). A summary and quiz complete the document. (A teacher's guide is available for this module.) (CT)

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etc Entrepreneurship Training Components

GETTING DOWN TO BUSINESS:

Plumbing Business

Module 35

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GETTING DOWN TO BUSINESS:

Plumbing Business

Barbara Sanderson

May 1981

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TABLE OF CONTENTS

Introduction 1

Unit 1
Planning a Plumbing Business. 3
Learning Activities 10

Unit 2
Choosing a Location 13
Learning Activities 19

Unit 3
Getting Money to Start 23
Learning Activities 29

Unit 4
Being in Charge 33
Learning Activities 41

Unit 5
Organizing the Work 43
Learning Activities 50

Unit 6
Setting Prices 53
Learning Activities 60

Unit 7
Advertising and Selling 63
Learning Activities 70

Unit 8
Keeping Financial Records 73
Learning Activities 80

Unit 9
Keeping Your Business Successful 83
Learning Activities 89

Summary 91

Quiz 93

INTRODUCTION

How are you going to use your job skills after you finish school?

Have you ever thought about starting your own plumbing business?

This module describes people who have started and managed small plumbing businesses. It gives you an idea of what they do and some of the special skills they need.

You will read about:

- planning a plumbing business
- choosing a location
- getting money to start
- being in charge
- organizing the work
- setting prices
- advertising and selling
- keeping financial records
- keeping your business successful

You will also have a chance to practice some of the things that plumbing business owners do.

Then you will have a better idea of whether a career as a plumbing business owner is for you.

Before you read this module, you might want to study Module 1, Getting Down to Business: What's It All About?

When you finish this module, you might want to read

- Module 29, Getting Down to Business: Energy Specialist Service;
- Module 33, Getting Down to Business: Construction Electrician Business;
- Module 36, Getting Down to Business: Air Conditioning and Heating Service.

These modules are related to other programs in trades and industry.

UNIT 1

Planning a Plumbing Business

Goal: To help you plan your plumbing business.

Objective 1: Describe the services, customers, and competition of a plumbing business.

Objective 2: List three helpful personal qualities an owner of a plumbing business might have.

Objective 3: List three ways to help your business compete successfully.

Objective 4: List one or more special legal requirements for running a plumbing business.

WALT POWELL PLANS A PLUMBING BUSINESS

Walt Powell has worked as a plumber for ten years. Now he wants to work for himself. He wants to start his own small plumbing contracting business doing construction work on homes.

During high school, Walt had worked as a general helper on small construction jobs. He had decided he'd like to specialize in plumbing. After high school, he applied to the plumbers union but didn't have the required experience. He found it difficult to get a job that would give him the experience he needed. But he continued to work in construction. He kept on looking for an opportunity to learn the plumbing trade.

After about a year, one of the plumbers he met on a job hired him as a helper. He learned the trade on the job and gradually became a skilled plumber. He worked mostly in residential construction of single homes and small housing tracts near the town where he lives.

New construction is on the increase in the area where Walt lives. He says, "Now would be a good time to start on my own. There should be enough work so that someone starting out like me can get jobs. I can start by talking to the contractors I've worked for over the years who know they can depend on me. I know some things about the business side of it. I'm ready to learn what else I'll need to know."

Walt took a contractor's licensing test on plumbing and related laws. When he found out he passed, he said, "Now I'm ready to organize my own business."

Planning a Plumbing Business

There are many, many small businesses in America. Small businesses can have as few as one worker (the owner) or as many as four workers. A small business owner is "self-employed." Often a whole family works together in a small business.

Most plumbers work for someone else as an employee. But some plumbers work independently and are self-employed. Others may hire employees and become an owner-manager. These materials can help you learn what is involved in being self-employed. Then you can decide if it is a long-term career goal you would like for yourself.

Walt Powell wanted to start his own plumbing business. As you work through these materials, you will see how his business develops. In this section you will learn about these four things involved in planning a plumbing business:

- deciding what the services, customers, and competition will be;
- deciding what personal skills and characteristics are needed for this type of business;
- deciding what to do to compete successfully; and
- learning about the legal requirements for running this type of business.

Services, Customers, and Competition

An important step in planning is to decide what services you will offer, who your customers will be, and what the competition offers.

Services. There are several types of plumbing services that can be provided. Some companies specialize in one area. Others provide a range

of services. One service area is to do construction work and install the plumbing in a new building. This is the type of service that Walt Powell plans to provide. Another type of service is to remodel or replace plumbing. For example, a home owner may call in a plumber to modernize a bathroom or replace a sink. A third major area is to clean or repair the plumbing or replace small equipment. Often drains and water lines collect sludge or grease and need to be cleaned out. Repairs are often needed. These range from a leaky faucet to a broken water line. Equipment may need to be fixed or replaced. It could be a garbage disposal or a water heater.

Customers. General contractors are good customers for new construction work in homes and other buildings. General contractors may also be customers for remodeling work. Home owners are potential customers for drain cleaning, repair work, and remodeling. Other potential customers are apartment owners and owners of small businesses, such as restaurants or stores. Factories and office buildings also need services. These include construction, remodeling, repair, and maintenance services.

Competition. There is competition in the plumbing business. Some companies are large and provide a wide range of services. Other businesses specialize in a type of service such as underground water pipes or small repair. There are some plumbing companies that have several branches, especially in the area of drain and sewer cleaning. Each business offers a service they believe people need and will pay for.

Personal Qualities

Walt wants to know if he has the personal qualities that are needed to run his own business. He knows he has the necessary skills in his craft. He learned about business laws for his license test. Below are personal qualities that he felt would be important.

Like people. He feels it is important to like dealing with both customers and employees.

Be a good organizer and planner. He feels it is important to be organized and to be able to plan his time and his work. He also knows it is important to pay attention to details.

Have good business sense. He knows he must know about costs and decide how much to charge. That way he can make a profit and yet not charge more than his competition.

Be a problem solver. He knows that customers will call him with a problem. His job is to help solve these problems.

Be a hard worker. He knows it will take hard work. He will probably work longer hours than at his old job.

How to Compete Successfully

There are several things you can do to compete successfully. We will mention them now, and you will learn more about them as you work through the materials.

Do a lot of research and planning before you start the business. This will help you to decide what services to offer and where to offer these services. You should offer a service you think people want and will pay for.

Offer special services that other businesses do not offer. For example, you could offer 24-hour response to emergency calls.

Establish a business image that people will remember. You may want an image that is professional, yet friendly.

Legal Requirements

The laws for starting a plumbing business vary from state to state. Most states require that you have several years of experience, pass a state test, and demonstrate your financial reliability to qualify for a contractor's license. Once you have your contractor's license, then you can start your own business. You will usually need a city business license, also. You will have to find out exactly what the legal requirements are in your local area.

Summary

Plumbing businesses do new construction, remodeling, repair, and maintenance work. They provide services for homes, apartments, small businesses, and commercial buildings. In new construction, they work as a subcontractor for a general contractor. The small business owner should be good at his or her trade and also good at running a business.

Learning Activities

Individual Activities

1. Look up "Plumbing" in the Yellow Pages of your phone book. Make a list of the services advertised.

2. Look up "Plumbing" in the Yellow Pages of your phone book. Make a list of the customers specified.

3. Look up "Plumbing" in the Yellow Pages of your phone book. Make a list of several things that are mentioned to make a business stand out from its competition. For example, free estimates might be emphasized.

4. Do you have the right personal qualities to run a plumbing business? Put a check by each quality you think you have.
   _____ Work well with people
   _____ Organized
   _____ Interested in business
   _____ Can solve problems
   _____ Willing to work long hours

5. Call or write to your state licensing agency. Ask what the legal requirements are for running a plumbing business and what fees or bonds (a bond is a guarantee that you will pay up to a certain amount of money in claims against you) are required. Make a list of the requirements.

Discussion Questions

1. What do you think are the advantages and disadvantages of running your own business as compared to working for someone else?

2. List users of plumbing services in your local area and typical services they might need, such as unclogging a drain.

3. Do you think Walt Powell has a good background for starting his own business? Why, or why not? Also list ways Walt can get more information to help him start his business.

Group Activity

List all the questions you can think of to ask the owner of a plumbing business. For example, "What services do you offer? What customers do you serve? What is your competition like? What knowledge or skills do you need to run your own business?" These are just a few questions to get you started. List at least 20 questions.

Also invite a person involved in a plumbing business to visit your class while you are working on these materials. You can ask the visitor to answer these questions. Try to give your guest the list of questions before he or she comes, so the person will know what you are interested in.

To find someone to invite, contact your local trade association or call someone from the Yellow Pages.

UNIT 2

Choosing a Location

Goal: To help you choose a location for a plumbing business.

Objective 1: List three things to think about in deciding on a service area for your business.

Objective 2: Pick the best location for a plumbing business from three choices and explain your choice.

WALT DECIDES WHERE TO LOCATE

Walt knew he wanted to continue to work in the area where he lived, Easton. He knew a lot of the people in the local construction business. They could help him get more work.

Easton is a small town near a large city. Over the years the suburbs of the city have been expanding Now more people are finding Easton an attractive place to live. One local company is increasing the capacity of its plant in Easton. Two other large firms are in the process of building facilities there. As jobs are created, new houses will be needed.

Walt says, "The established plumbing contractors are in a good position to do large commercial jobs and housing tract developments. They won't be very interested in doing single homes. Single homes is what I like and know best. So that's the market I'll aim for."

Walt set up an office in his home. He brought in a desk, typewriter, adding machine, file cabinet, and books and supplies he would need for keeping records. He bought an answering machine that could take messages for him. He got one that you could call into and hear the messages played back. He also started using a secretarial service near his home. He used it for typing jobs to be done that he wanted to look professional.

Now Walt has decided on the area he will service and the services he will provide. He also has set up an office.

Choosing a Location

There are several things to think about when you choose a service area for your business. You should consider these factors.

- Are there enough customers in this area?
- What is the competition?
- Is this where I want to work?

You will also need to decide on a specific location for your shop and office. These are things to think about.

- Is this enough space?
- Can I afford the rent?
- Is the building in good condition?
- Is the location convenient?

Customers

The housing mix, income level, growth trends, and economic conditions of the area are important in deciding where to locate and what services to provide. Older homes generally have more repair, maintenance, and replacement work. People owning houses in a high economic area may spend more for remodeling or replacement than those in a low-income area. An area where new houses or new businesses are being built is a good location to do new construction work.

Walt thought Easton would be a good place to do new construction work. People were moving to the area. Industry in the area was expanding. General economic conditions and the availability of money to finance building are also important in new construction. Repair work tends to be more even. But the amount of new construction work may be unstable. Trade magazines and business publications are good sources of information on the age of houses and growth patterns.

Competition

You must also consider the other businesses in the area that provide this service. You can find out how many there are by looking at the Yellow Pages. You should also consider the size of the business. A person working alone or a small business would not provide the same competition as a large operation. Also consider what services these businesses provide. Perhaps you are offering a new or better service. There are a number of things to learn about regarding the competition. Talking to other people in the trades in your local area is a good way to find out about these things.

Balance Between Customers and Competition

What is important is the number of customers in relation to the people offering this service. Walt felt that there was enough work in Easton to support himself. Walt also felt he was aiming at a different market--single-family homes--than the big plumbing companies.

Personal Considerations

There are other things to consider about the location. You might ask, "Is this where I want to work? Is this where I want to start a business?" People often have personal reasons for deciding where to start their businesses. These reasons include family or friends. Walt wanted to work in Easton where he had contacts in the construction industry.

Selecting a Specific Location

Sometimes a plumber can start a small business from his or her home. It depends on whether it is legal where they live. The plumber can use space in the house for an office and use the garage for storage. The plumber may hire an answering service to take his or her calls.

A larger operation would include a shop, storage area, a garage for trucks, and an office. The business would be located in an area zoned for commercial or industrial use. Customers would not usually come to the office. Rather, the owner would talk to them on the telephone. Or the owner might go to their homes or businesses to discuss and do the work.

The building should be clean and in good condition. Also, it is important that the shop be close to the jobs. Otherwise a lot of time may be spent in travel. The business may include selling plumbing parts, or it may have a showroom with fixtures. Then the customers would come to the shop. In this case, appearance and nearness to potential customers would be important. The business owner has to weigh the advantages of having a shop and office against the expense of renting the space.

Summary

To decide on a service area, you must consider if there is enough business in the area to support a new plumbing business. In selecting a specific office space, you must decide how much you can afford and if the space location and condition of the building meet your needs.

Learning Activities

Individual Activities

1. List five things to think about in deciding in what service area to start a plumbing business.

2. Look up "Plumbing" in the Yellow Pages of your local phone book. Select one listing you think might be for a large company and one you think might be for a small company. Write your reason why. Count the number of businesses listed.

3. Get a map of your community. Locate two places you think might be appropriate for a plumbing business, and list your reasons.

4. Look up the addresses of three plumbing businesses in the Yellow Pages of the phone book. Find them on the map. Try to drive by one or more of the businesses to see where they are located. If appropriate, stop and ask if you can look at their facilities. (A plumbing business that sells retail parts or has a showroom may be easiest to visit.)

5. Look in the classified section of the newspaper under "Lease or Rent - Industrial Facilities." What is the range in price per square foot of space? Make a list of features mentioned that you think would be desirable for a plumbing business.

Discussion Questions

1. Describe your own community and how much of a need there is for plumbing services. Do you think it would be wise to start a plumbing business in your community? What services would you offer?

2. Which of these locations seems best for starting a plumbing business? Discuss.

   A small town serving a farm area in Ohio. Most of the homes are old. There is one long established plumbing business with a good reputation in the community.

   A medium-sized town in Ohio that has several industrial plants. There is a new plant being planned, and new home construction is increasing. There are four plumbing businesses.

3. A plumbing contractor decides to rent a shop. He wants about 1,500 square feet. He will only use 1,000 square feet now but wants room for expansion. He saw these two listings to choose from. Which do you think he should choose? Why? What other information might he want to help him make a decision?

   Bargain Industrial Space
   $ .25/sq. ft. - 2,500 sq. ft.
   $625/month
   garage and shop

   Near Freeway
   $ .40/sq. ft. - 1,000 sq. ft.
   $400/month
   Small office; garage and shop;
   restrooms

Group Activity

List five factors you think are important in deciding what type of area to serve for a plumbing business that does repair, remodeling, and maintenance work. As a group, rank these factors in order of importance.

Now list five factors you think are important in deciding what type of area to serve for a plumbing business that does new construction. As a group, rank these factors in order of importance.

Compare your two lists. There is no correct answer. Different people may feel different factors are most important.

UNIT 3

Getting Money to Start

Goal: To help you plan how to get money to start a plumbing business.

Objective 1: Write a business description for a plumbing business.

Objective 2: Fill out a form showing how much money you need to borrow to start your plumbing business.

LOAN OFFICER

WALT APPLIES FOR A LOAN

The major expenses Walt has to start his business are the purchase of a truck and equipment, cash for parts, and money to live on while he is starting out. He plans to spend the following during the first three months (not including his living expenses):

Uses of Cash - First Three Months

New truck	$12,000
Equipment	5,000
Office expense	1,000
Other expenses	2,000
Cash for parts, etc.	5,000
	$25,000

He needed the $5,000 cash so he could buy the parts ahead of time for the first few jobs he did. Also, it allowed for unexpected expenses.

In addition to what Walt needed to live on, he had saved $10,000 he could invest. He borrowed $5,000 from his father. That left $10,000 that he needed. He decided to put a down payment on the truck of $2,000, borrow the remaining $10,000, and pay for it in installments.

Walt was concerned that the bank might not lend him money for the truck since he was going into business for himself. So he wrote a business description to explain why he needed the loan. The business description included Walt's personal background, facts about his business, and financial information. The truck would be used as collateral for the loan.

Walt says, "It's going to cost more than I thought to get started. Preparing the business description helped me plan ahead. So I'm clearer on what my expenses are and how much I need to charge to make a profit."

Getting Money to Start

Starting a new business requires money. How much money depends on how large an operation you want to have and the kind of work you plan to do. In this section you will learn something about how to get money to start a plumbing business.

Sources of money are:

- your own money;
- gifts, personal loans, and investments; and
- bank and credit union loans.

Walt used his own money and borrowed money from his father. To apply for a bank loan for the truck he prepared a business description. It included the following:

- personal background information;
- a description of the business; and
- financial information.

Information Needed to Get a Business Loan

Personal background information. This section includes schooling, work experience, and financial history. Someone who had paid his or her bills in the past would have an easier time getting a loan than someone who had been late or had not paid their bills. Also, the loan officer wants to know if the applicant has the skills and knowledge to run a business of this type.

Business description. The business description should be written clearly and simply and should explain your plans for your business. It should tell the lender the following:

- the kind (and name) of the business;
- the services to be provided;
- the location of the business and why you selected it;
- the kind of customers you will serve;
- the kind of competition you will have and why you think you can compete;
- your expected growth; and
- your hiring plans.

Financial information. The lender will require detailed financial information. The banker wants to support a profitable business. Making loans is how a bank makes money! However, the banker does not want to lend money to someone who may not be able to pay it back. The loan officer wants to know that you have planned ahead, and how much money you will need. The officer also needs a good estimate of how much money you will have left over after paying your costs.

A new business will usually have expenses in the beginning before providing any services or collecting money. These are called start-up expenses. In the beginning, a business will usually spend more than it makes. It will need money to support getting started. As the business gets established, it will want to collect more money than it spends. It will use some of the difference to pay back any money that was borrowed.

Typical start-up costs for a plumbing business may include: trucks, equipment, tools, an inventory of parts, office furniture, a typewriter, rent deposit, etc. There will also be on-going expenses. These include: salaries, rent, maintenance, supplies, gas, advertising, insurance, utilities, accountant services, license fees, etc.

The type of service a business offers is also important in figuring out how much money is needed. Some types of work require more expensive equipment than others. In doing repair work, you need an inventory of frequently used parts to carry in the truck. In doing new construction, you may need to purchase parts ahead of time. You may not get full payment until after the job is complete. A business should have money

available for unexpected expenses. It also should allow for a reserve fund if customers don't pay for the work or if business is slow.

Summary

To start a plumbing business requires money. The start-up costs may be more than the owner can afford from personal savings. The owner may need to borrow money. A good business description showing that the owner is capable, organized, and has planned carefully can help in obtaining a loan. A good business description is also useful for the owner in making decisions and in having clear goals for the business.

Learning Activities

Individual Activities

1. List the three major parts of a business description.

2. Write a short business description for Walt Powell's business based on the information you have been given. Include at least one sentence for each of the three major parts of the description. Remember that the description is to show that Walt's business is well planned and likely to succeed.

3. Make a list of ten expenses of a plumbing business.

4. Walt estimates that he will spend $25,000 in the first three months of business. He estimates that in the first three months he will only collect $10,000. Do you think Walt should still go ahead and start his business? Defend your answer.

5. The following statement of financial need was for George Jensen's plumbing business--Tru-Value Plumbing. Fill in the blank spaces on the form and indicate how much George needed to borrow from the bank.

STATEMENT OF FINANCIAL NEED			
Starting Expenses		Money on Hand	
Salaries	$ 9,000	Cash on Hand	$20,000
Building and Property	4,000	Gifts or Personal Loans	14,000
Repairs and Renovations	2,500	TOTAL	34,000
Equipment and Furniture	20,000		
Parts and Supplies	5,000		
Advertising	500		
Other	3,000		
TOTAL	$44,000		
		TOTAL STARTING EXPENSES	_____
		TOTAL MONEY ON HAND	_____
		TOTAL LOAN MONEY NEEDED	_____

Discussion Questions

1. Start-up expenses for a plumbing business can vary. What are the advantages of starting out small? What are the advantages of starting out large?

2. Would you lend money to Walt Powell for his plumbing business? If so, what conditions would you put on the loan?

3. A plumber, Harvey, started a repair business and needed to decide how much to spend on supplies and parts to carry in his truck. At first he bought only the bare minimum. After two months, he decided to double the size of the inventory he carried. Why might he have decided to increase the inventory of parts he carried in the truck?

Group Activity

Do a role play situation. Have one person play the role of Walt Powell and another person play the bank loan officer. Have Walt ask for a $10,000 loan for a truck. Do the role play for five minutes. Have each person share how it felt to play his or her role. Then change roles and have two different people act out the same situation. See what different people do in a similar situation.

Before starting the role play, discuss what you would wear when you go to talk to the bank loan officer.

UNIT 4

Being in Charge

Goal: To help you select and manage the people with whom you work.

Objective 1: Decide how to divide the work of your business among several employees.

Objective 2: Pick the best person for a specific job in your business.

Objective 3: List three ways to keep your people happy.

WALT HIRES AN EMPLOYEE

Walt wanted a helper to assist him on jobs. He didn't need a journeyman, and he couldn't afford the wages for one. But he could use someone to help him on jobs. This person would carry materials, clean up, and assist him in the work. He wanted someone who learned quickly.

His cousin, Jean, asked him if she could work for him as a helper. He had many doubts about hiring a woman. He thought she wouldn't be able to do the heavy work. The other workers might be uncomfortable around her. Also, she might not like it and would quit after he trained her. But she had helped him some before. He knew she could do a lot of the plumbing work. She was as strong as many men, too. She really wanted to give it a try and was willing to work for low wages to get experience.

Walt remembered how hard it was for him starting out to get the work experience he needed. He appreciated someone giving him a chance. So he decided to give her a try. He hired her for a three-month trial period. He told her, "I'm not going to treat you special and just give you the easy tasks. You have to carry your own weight. You have to be willing to work in crawl spaces and carry heavy things, just like any other plumber. But I'm not going to try to make it hard for you either."

Walt found Jean was a good worker and dependable. She was eager to learn and quickly took over more responsibilities. Walt liked her companionship. Jean handled herself well with the other workers on the jobs they did.

Walt continued to be responsible for the business matters and price negotiations.

Being in Charge

Owning your own plumbing business may involve hiring and supervising other people. This unit will discuss:

- tasks and the skills needed to do them;
- hiring staff; and
- keeping employees happy.

Tasks

Here are some typical tasks in a plumbing business and the background required for each of them.

Managing tasks. These tasks include organizing the work, scheduling, making decisions, training and supervising employees, organizing financial information, planning, customer relations, promotion, handling business details, purchasing, getting permits, and staying up to date on codes. With respect to background, it is important to have knowledge in the technical aspects of plumbing, experience in supervising others, and business skills.

Estimating tasks. These tasks include making estimates of how much a job will cost, talking to customers about what they want and how much they will pay, and negotiating with customers on the price for a job. With respect to background, it is important to know how long different tasks take, be able to find the price for required parts, and be skilled in dealing with customers.

Doing the plumbing work. These tasks involve all kinds of plumbing, including new residential construction, new commercial construction, remodeling, repair work, or cleaning lines. Certain background and skills

are required. You should have basic training and experience in the specific area. Large jobs may involve more specialization or supervisory responsibilities. Repair work would require skills in dealing with customers.

Office work. These tasks include typing, bookkeeping, filing, record-keeping, and answering telephones. With respect to background, you should have basic typing, office procedures classes, or similar experience.

Walt planned on doing the managing, estimating, and office work, as well as doing most of the plumbing. He hired an assistant to help with the plumbing tasks. Larger companies are more specialized. They may employ many plumbers as well as people who serve as supervisors, estimators, and office workers.

Choosing Workers

Good workers are important to the success of a business. To select a good employee, you should plan what tasks need to be done. Then recruit the right employee for those tasks.

The best way to recruit depends on your local area. Some sources of new employees are:

- unions and trade associations;
- suggestions of friends;
- schools and training programs;
- the U.S. Employment Office; and
- want ads in the local newspapers.

Some employers hire through the union. They tell the union how many workers they need and any special skills required. They may want a journeyman or an apprentice. The union will then dispatch a worker from its list of available people. The employer can recall a former worker. Or the employer may be able occasionally to request a specific person. The minimum wages and benefits are set by the union. The employer who hires

through the union knows that the worker has met certain skill requirements. It is important to check with the local union on its policies.

Other employers hire non-union plumbers. Often they can pay the employee a lower wage than if they hired a union member. However, they may find it difficult to find a well-trained non-union plumber. Also, they will probably not be able to work on jobs that hire other union workers.

To hire office help, you should write a job description and advertise the position. You will want applicants to fill out an application and have a personal interview. You should look for someone who has the skills required, is reliable, and wants to do the job.

Keeping People Happy

Once you've hired your employees, it's important to keep them happy. That way they will do quality work and continue on the job. Some of the ways to do this are: good pay and benefits, clear policies, clear directions, appropriate training, and good personal relations.

Pay. The pay and benefits you give your employees should be close to what they would get working for someone else. If you pay less, they may get a job elsewhere. If you pay much more, you may not be able to keep your prices low enough to be competitive. If you are a union shop, their pay may be set already. Then you will pay a minimum union rate. A bonus for work well done or other monetary incentives can motivate your employees.

Clear policies. You should be aware of labor laws regarding pay, overtime, and other work conditions and follow these laws. You should be clear on what your policies are. Communicate what they are to your employees. You may decide to offer emergency plumbing repair service. Then you will want to make arrangements for someone to be willing to work evenings and weekends to respond to calls.

Clear directions. The clearer you can be with your employees about what you expect, the more likely they will do it. Some things you will want done a certain way. Your employees aren't mind readers. You need to be clear on how you want things done. In other areas you may want to allow your employees to use their own judgment. In those cases you should support your employees' decisions. Tell them if you want something done differently in the future.

Appropriate training. You should know what your staff is capable of and give them training when needed. You may hire experienced workers. Even so, you should start out by supervising them closely and checking their work. Then you can give them more independence. Also you can assign them to jobs that are appropriate to their skill level. You can also teach them new skills. Appropriate training and supervision will benefit your employees and maintain the quality of the work. You can also encourage employees to take available training classes. That way they will learn new skills and keep current on new developments in your field.

Good personal relations. As the owner, you should talk with your employees. Learn what concerns they may have and be sure they are clear on what you expect. Recognition of work well done can promote good working relationships. Working as a supervisor is a good way of learning these skills for managing employees.

The attitude of the owner and how the owner relates to the staff set the tone of the business. The owner may be positive, productive, fair, and may enjoy the work. This can create the kind of company that people want to work for. On the other hand, the owner may be unorganized, inconsistent, overly critical, or lax in supervision. This can create a negative atmosphere and employee dissatisfaction. The owner sets the standards and can be key in influencing the attitude of workers.

Summary

There are many tasks involved in a plumbing business. The owner should be clear on what the tasks are and select appropriate people to do them. The way the owner manages is key to setting the atmosphere for a business.

Learning Activities

Individual Activities

1. Match the task below with the most appropriate person to do the job in a small plumbing business.

____ 1. Type a bid	a. Owner
____ 2. Prepare a big estimate	b. Journeyman
____ 3. Decide to hire a new employee	c. Office worker
____ 4. Go out on a repair call	

2. Call your local plumbers' union. Ask how people join the union and how jobs are assigned. Also ask what the pay scale is for both an apprentice and a journeyman. Write down your findings.

3. Look in your local newspaper and see if there are any jobs listed for a plumber. Bring in any examples of job listings you find. Share them with the class.

4. Based on the information below, which of these workers would you send out alone on a repair job?

___ a. An apprentice

___ b. A journeyman, two years of experience, has worked for the company for two years

___ c. A journeyman, five years of experience, has worked for the company for one week

5. List three ways to keep employees happy.

Discussion Questions

1. Most plumbers are men. As an owner, would you be willing to hire a female plumber? Why, or why not?

2. Some people like being a foreman. Other people don't. What would you like about being a foreman? What wouldn't you like?

3. Which of these employment ads do you think is better? Why?

Plumber	Plumber
Experienced only	Journeyman level
Top Pay 297-8134	Commercial remodeling
	532-1648

Group Activity

Invite a representative of the plumbers union or the plumbers apprenticeship program to visit the class. Prepare a list of questions to ask about how the union operates and about the apprenticeship program. Interview the visitor. Following the interview, discuss what members of the class learned.

UNIT 5

Organizing the Work

Goal: To help you learn how to keep track of the work of your plumbing business.

Objective 1: On a work order form, list what needs to be done for one of your customers.

Objective 2: Given several tasks to do on a particular day, write a work schedule for yourself or an employee.

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WALT GETS ORGANIZED

Walt found that in working independently he has more scheduling and coordination to do. He needs to plan ahead to know what work needs to be done when and to have the materials ready. He has to coordinate with the other workers. He has to be flexible and adjust to changes.

Most of the houses he works on take three to six months to complete. He needs to work for a day or two early in the construction process to lay pipes for the rough in work. Later he comes back for a day or two when the carpenters are putting up the walls to do the top out plumbing. He needs to coordinate this with the other workers. He has to can get the wall pipes in at the appropriate stage. Toward the end, he comes back for two to four days to do the finish work and put in the fixtures.

Walt likes to be busy most of the time. But he finds that sometimes he takes on too much work. Then it is difficult to adjust to unexpected changes and delays. He doesn't like that much pressure. So he decides to take on fewer jobs and to allow more time for each one.

Walt works well with Jean. He gives her instructions throughout the day as things need to be done. But sometimes he finds it works well if he gives her a list of the things he wants done. That way she can come to him with any questions.

Walt says, "I'm getting better at scheduling as I get more experience. But it's still something I have to stay on top of."

Organizing the Work

In a plumbing business you must organize the work, do the work, and check the work. That way you make sure it was done well and that the customer is satisfied. It is important to set up a system so employees know what needs to be done, when it must be done, and who will do it. The system should be flexible and allow for changes. For example, one job may be delayed because needed parts are not available or due to bad weather. Any system should allow for making adjustments when needed.

The Work Order

The work order is used to record the customer's order and to request that the workers do the work. Some work orders may be filled out over the telephone or by the worker when the work is done. This would be done for service work or small repair jobs. It is different for a larger job, such as a construction or a major remodeling job. Someone will inspect the job first and make a detailed estimate. Then the person will use this information to prepare a work order or contract.

The work order is important in describing what work should be done and who should do it. The customers get a copy of the work done for their records. It is important that the work order be filled out carefully and completely. That way there is an accurate record of the work. This can be very important in cases of misunderstandings with customers about what is to be done and the cost.

On the next page is a sample work order for a commercial installation job.

WORK ORDER

FROM: Aardvark Plumbing
5673 Frontage Road
Centerville, Oregon

WORK FOR: Harry's Deli
620 Market Street
Centerville, Oregon

DATE: 8/1
WORK ORDER NUMBER: 81
ORDER TAKEN BY: Leroy
START WORK ON: 8/4/82
FINISH WORK ON: 8/5/82

TERMS OF PAYMENT: cash

Person Doing Work	Description of Work	Materials	Labor	Total Cost
Frank	Install 2 stainless steel sinks	583 00	321 00	

WORK FINISHED ON: 8/5
BY: Frank

TOTAL MATERIALS:	583.00
TOTAL LABOR:	321.00
TAX (5%):	29.15
TOTAL COST:	933.15

Contracts

A contract is used for larger jobs. A contract includes:

- the names of the people involved;
- what services will be provided;
- when they will be performed;
- how much it will cost;
- how it will be paid for; and
- other appropriate information.

Sometimes the customer pays when the job is complete. Sometimes they pay in installments as stages of the work are completed. A clear contract is important for the protection of all parties. Walt uses contracts for his construction jobs.

Scheduling

Someone must plan the work. She or he must decide in what order it should be done and who should do it. There are a number of things to consider in coordinating work. First, you need to know how important it is that the work be done soon. You would want to place jobs such as unclogging a kitchen sink before a routine maintenance job. A close estimate of how long a job will take is helpful. Second, you need to know the skills of all workers. You also need to know when they will be available to do the work they specialize in. Grouping together jobs in the same part of town can increase efficiency. Third, in new construction, you must plan for the delivery of parts and coordinate your work with the other contractors. So the person doing the scheduling must juggle different things. The person also needs to be flexible and to allow for the unexpected. This could include a call from a good customer who is having a plumbing emergency.

It is important for good customer relations to do the work as scheduled and to keep appointments. There may be a change in the schedule. Then it is important to consult with the customer first and to inform him or her of last-minute changes.

Below is a sample work schedule for one day. The work schedule lists the name of each employee. It also shows the work to be done that day in the order it should be done. In this case, jobs are described by work order numbers. On April 6 Hank and James worked together on a two-person job on the first assignment.

WORK SCHEDULE

DATE: Monday, April 6

Employee	Description of Job
Hank	#104, #101, #105
James	#104, Start Campbell job, #100

Each worker may also receive a written work schedule for the day. Often the person doing the scheduling will want to communicate with employees during the day. This can be done by having:

- employees return to the office after each job;
- employees call in during the day;
- a wireless paging system; or even
- a radio communication system.

Time Planning

A major problem for most small business owners is planning their own time. Owners tend to work long hours, especially when they start the business. There are a number of ways to improve your use of time. One way is to list all the things you want to do. Then rank them in order of importance. Take into consideration both how important they are and when they should be done.

A written schedule is also helpful. Make reasonable time estimates and allow time for the unexpected. Also, many people find it easier to stick to a schedule if they include time for doing those things they enjoy doing. Often in making up a written schedule a person will find that there just isn't time to do everything. Then he or she must make choices and accept that some things on their list just won't get done. At that point, they may find they need to talk to other people and change agreements on getting some things done or delegate work to other employees.

Walt found that things went more smoothly when he didn't schedule the work too tightly. Then he could be more flexible in adjusting to changes.

Summary

A plumbing business needs a system for recording work orders and scheduling the work. Carefully planning and good communication are important for a smooth operation.

Learning Activities

Individual Activities

1. List five things you would find on a contract.

2. Harris repaired a drain in a kitchen sink. It took one hour at $35.00 per hour labor and $20.00 in parts. Fill out the form below using this information.

WORK ORDER

Person Doing Work	Description of Work	Materials	Labor

TOTAL MATERIALS _____

TOTAL LABOR _____

TAX (5% on materials) _____

TOTAL COST _____

3. List three things you would find on a work schedule.

4. James has three jobs to do on Tuesday, March 4, in this order: work order #81, #76, and #82. Fill out the form below using this information.

WORK SCHEDULE

Date: _____

Employee	Description of Job

5. How many copies would you want of a work order? Why?

Discussion Questions

1. Bring in several examples of work order forms. Perhaps your parents have examples of work order forms in their home records or use work orders on their job. Compare the forms, select the one you like the best, and explain why. Which one seems easiest to use? Which one seems most professional? Which ones seem appropriate for big jobs? Which ones are adequate for small jobs?

2. What problems might occur if you did not use a work order form but just told your employees what jobs to do?

3. Given these jobs, how would you schedule them in a day? (Times include some time for travel.)
   a. rush job--unclog lines, don't know how long it will take.
   b. rush job--toilet repair, 1 hour
   c. routine maintenance call--near Job (a), 1 hour

d. replace garbage disposal--in other part of town; not a rush job, but want it soon; 3 hours

Group Activity

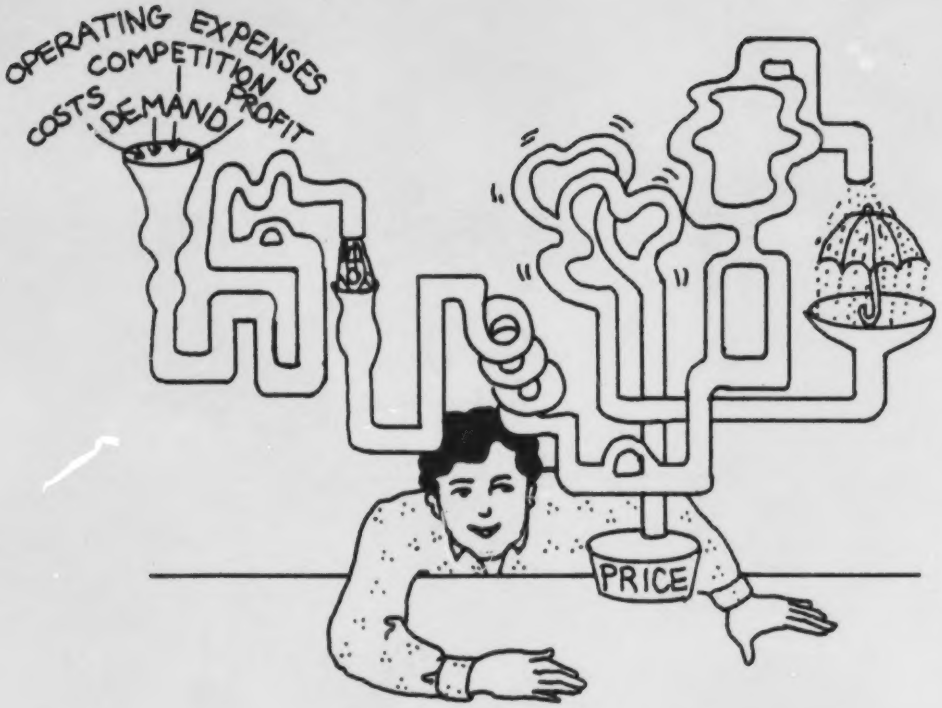
In a group, make a list of the tasks that Walt might have. Number them in order of importance. That is, which tasks should be done first, second, and so forth? Then make up a schedule for Walt for the day. There may be too many tasks for him to complete in one day. If so, suggest how and when these remaining things should be done. Also discuss which items would have the most long-term benefit.

UNIT 6

Setting Prices

Goal: To help you decide how to set prices for your plumbing business.

Objective 1: Select the best price for one of the services of the business.


OPERATING EXPENSES
COMPETITION
COSTS
DEMAND
PROFIT
PRICE

WALT DECIDES HOW MUCH TO CHARGE

Walt did estimating work on previous jobs. So he is familiar with the estimating process. He has guidelines he uses as to how much the plumbing will cost for each room. He has manuals he refers to in figuring out costs.

There are other things Walt considers in making an estimate. He must know how complicated the system is, the type of system, and also what kind of fixtures are required. Walt needs to stay current on price changes to make a realistic bid.

In figuring out a bid, Walt determines the cost of parts and tax. He then adds that to salaries and other operating expenses. These include utilities, transportation, costs, and advertising. Walt then figures out his break-even point. That is, the point at which his price will cover his expenses. He adds to that the profit he wants to make. Walt keeps his operating expenses low so he can keep his bids low.

Walt describes how his bidding process come along. "At first I was bidding about the same as my competition. I wasn't getting many jobs. Contractors gave the jobs to people who had worked for them before. Then for a while I bid low and didn't include much profit. Then contractors were willing to look more closely at my bid and were more willing to use me. Once they learned I was reliable and did quality work, I increased my profit percentage. They continued to hire me. My strategy has been to keep my expenses low and to bid as low as possible to get new business."

Setting Prices

To be successful, you must set prices that:

- are acceptable to your customers;
- are competitive with similar services; and
- cover costs for parts, salaries and other operating expenses, and profit.

This unit discusses what to consider in setting prices.

Acceptable to Customers

Your prices must be acceptable to your customers. Repair work is fairly steady with price changes. But more people will do repairs themselves if the price gets high. This could reduce business. Remodeling and replacement work is more sensitive to price changes. People will not have the work done or will put it off as long as possible, if they feel the price is too high. In new construction, people will not be motivated to build new homes or buildings if the price is too high. This reduces the amount of new construction work to do.

In Line with the Competition

Customers often check the prices of several services. Then they decide whom they want to do the work. The customers will not be willing to pay higher prices unless there are extra services or advantages for them. These could include higher quality or reliability.

Components of Price

Cost of parts. The parts used are one component of the price. An owner can keep the cost of parts low by shopping for the best price, buying in quantity, and paying in cash rather than charging and paying interest. The owner must also consider quality. An inexpensive part may be more costly in the long run if it is unreliable.

Operating expenses. Operating expenses include salaries and employee benefits, equipment repair and depreciation, office expenses, insurance, accountant and lawyer fees, and all the other expenses related to operating a business. The owner takes all these expenses into consideration before deciding what to charge for a service.

Profit. The profit is what is left over after all expenses have been paid. The profit includes the owner's salary, monmey for income taxes, and money to improve the business. You must decide how much profit you can make and whether this is acceptable for you. Many small businesses start out with little or no profit in the first year.

Establishing a Price

In the plumbing business, the customer must be given a price ahead of time and must agree on it before the work begins. For repair work, it is common to set prices based on the cost of parts plus an hourly labor rate for the time involved. Sometimes the time is calculated to include travel time. Sometimes it is just time on the job. Sometimes there is a minimum charge. The charge for parts includes the cost of parts, a mark-up, and tax. The labor rate includes operating expenses and profit. Only about half of the money listed under labor is actually paid to the employee in salary.

In some cases, a plumbing business will have a fixed price for specific repair jobs rather than charging for actual time. Maintenance work

may be done at a prearranged contract price (such as $100 per month). This will vary with the terms of the maintenance agreement.

On large jobs, a fixed-price estimate is often given in advance. Someone visits the job site, finds out what the customer wants, and prepares an estimate of what the job will cost. The customer decides if he or she wants to have the work done at that price. If you bid too low, you may not make a profit. If you bid too high, you may be underbid by competition and not get the job.

It is fairly difficult to estimate large jobs. But there are manuals and forms available that give guidelines for figuring costs. Your costs of the finished job may be more than you expected. You usually cannot raise your price. However, if the customer requests changes, you can negotiate on the changes.

There are a number of things to consider in making an estimate. The job may lead to other work. In that case, you may want to accept a lower profit than usual. Also, it takes time to prepare an estimate. You may not want to spend your time that way. This is especially true if you don't think there is much profit in the job or if there is a lot of competition and you don't think you have a good chance at getting the job.

Inflation (rising prices) is another factor. Often a bid will say the price is good only for a few months as a protection against increased prices. The price you quote to the customer can vary widely depending on the quality of the equipment you install. Jobs with few parts and a lot of labor are harder to bid accurately than jobs that involve mostly parts and little labor.

In planning the work and making an estimate you must be sensitive to what customers want and to how much they will pay. Often your service will cost more than they expect. This is especially true in repair or replacement work. You will need to educate customers on what options are available. They will need to know what the advantages and disadvantages are of each choice. Then they will have a clearer idea of what they can

get for their money. The best estimate may not necessarily be the lowest price. Rather, it will provide customers with what they want at a reasonable cost to them.

Below is an example of how Walt prepared an estimate for a certain job.

Parts		$3,000
Operating Expenses		2,000
	TOTAL	$5,000

If Walt asked for $5,000 to do this job, he would "break even," or make enough money to pay for expenses. To make a profit, he'd have to raise his price:

Parts & Operating Expenses	$5,000
Profit (15% of total cost)	750
Proposed Price	$5,750

Summary

Setting prices depends on customer demand, the prices of the competition, cost of parts, labor and other operating expenses, and the amount of profit desired. The customer and the contractor should agree on the price of each job ahead of time. Prices can be set based on actual costs of parts and labor, fixed price bids, or pre-established monthly rates.

Learning Activities

Individual Activities

1. Call up at least two plumbing repair businesses. Ask what their hourly rates are for repair work. Report to the class on what you find out.

2. List five expenses included in the hourly labor rate.

3. A job will cost the owner $40 for parts and tax on parts and $45 for labor and overhead expenses. Which would be a fair price to charge a customer?
   a. $85
   b. $100
   c. $125

4. In making an estimate, Fran figured the parts and tax on parts would be $500 and the overhead and labor expenses would be $400. She wanted a profit of 10%. How much should Fran bid for the job?

Discussion Questions

1. Two contractors give these viewpoints on setting prices. Would you set your price high, low, or average? Why?
   - "I pay my employees well, and they do good work. I charge a higher price than most of my competitors. But my reliability and quality make it well worth the price."
   - "My prices are among the lowest in the area. I make less profit on each job. But I attract more customers that way, and my total profit is high."

2. A home owner wanted a new tub installed. Company A made a bid of $800. Company B made a bid of $1,250. But Company B used a higher quality unit that was more durable and attractive. As the home owner, would you accept A or B? Why?

3. Rank these jobs in order of their desirability to bid on.
   - Home owner wants a firm bid on a job of around $250.
   - A request for a bid on a large commercial job of around $15,000. The plumber knows there will be a lot of competition, and he has never done a job that big before.
   - A request from a small restaurant for an add-on job of around $3,000.

Group Activity

The class should be divided into groups of three. Have each person take the position of the customer, an employee, or the owner. Discuss whether you would prefer a fixed price for repair jobs or a price based on cost of parts and an hourly rate for time actually spent. For a large replacement job, which would you prefer?

UNIT 7

Advertising and Selling

Goal: To help you learn ways to advertise and sell the services of a plumbing business.

Objective 1: Choose the best way to advertise your plumbing business for a specific purpose.

Objective 2: Design a printed ad for your plumbing business.

WALT SELLS HIS PLUMBING SERVICE

Walt uses his contacts with building contractors as his main source of business. He says, "In my kind of business, word-of-mouth is the best way to advertise. If I do a good job on a contract, then that builder is likely to use me again and to recommend me to other builders. My business is based on repeat customers and referrals."

When Walt started his business, he called contractors and other people he knew in the building trades. He told them he was now working independently on new residential construction work. He asked them to keep him in mind if they needed his services.

He also printed business cards with his name and telephone number. He sent the card and a letter describing his qualifications as a follow-up to the people he talked to. He says, "It was uncomfortable at first calling people. But that seemed the best way to let them know what I had to offer."

Walt also listed his name and telephone number in the Yellow Pages of the telephone book. In addition, he painted a sign on his truck saying "Powell Plumbing" along with his contractor's license number. Finally, he regularly reads the local trade association publications to get leads on jobs. This also helps him keep current on the trends in construction.

Advertising and Selling

Customers need to know a service is available to use it. The purpose of advertising is to attract customers. How you deal with the customer and provide the service will determine if he or she is satisfied. This section will discuss:

- customer needs;
- advertising and promotion;
- selling and customer relations.

Customer Needs

Remember what the basic motivation is for people to use your services. At home and work, the customer wants a plumbing system that operates effectively with a minimum of problems and quick repair service when things go wrong. The customer wants dependable work at a reasonable price.

Advertising and Promotion

There are many ways to advertise a business. The way you select depends on the service you provide and whom you want to reach. Advertising can be expensive. You must decide how much you can afford to spend. A business owner wants his or her advertising to be cost effective. That is, business owners want to generate the most business at the least cost. That sounds easy, but it is difficult to achieve!

Below are a number of ways to attract customers and a brief description of how each way can be used in the plumbing business.

Yellow Pages of the telephone book. This is the major form of advertising for many plumbing businesses, particularly for repair work. The

ad should include your name, telephone number, and other key information. The cost varies depending on the local area and the size of the ad. Many companies select a name starting with a letter that comes early in the alphabet. That way their listing will be among the first people will see. Placement of the larger display ads depends on other things, such as how many years they have had a listing in the telephone book.

Personal contacts. Business from friends and their referrals can be a good source of new business. Giving people a printed business card with your name and telephone number assists in this. Often people draw on friends from a church, club, or other group they belong to.

Contacts with contractors and other plumbers. Contacts with contractors are particularly important in new construction work when the contractors subcontract part of the job. A letter followed up by a telephone call or visit may be used to make a contact with a contractor. Plumbers may also refer jobs to each other for work they don't specialize in. For example, a plumber who deals primarily in large contracts may refer someone else for a small job. Trade publications also provide information on contracts that are up for bid in some areas.

Truck. An attractively painted truck with the company name neatly printed on it can create a positive image for a business. It also can make its name familiar to customers.

Newspaper. Ways of using newspaper advertising depend on the local area and the rates charged. A large city newspaper ad will probably not be a cost-effective way to reach customers. But an appropriate ad in a smaller neighborhood or small town paper may generate a good response at a reasonable price. People looking for a service would be likely to look in the classified section where services are listed. A larger display ad in the paper may attract people, particularly for jobs that people may put off for a long time. These include jobs such as remodeling or drain unclogging.

Other contacts. Sometimes a plumbing business will do a direct mailing, call potential customers, or contact people who have used their service in the past. Radio spots could be used. But television would be too expensive. This is usually aimed at generating replacement, remodeling, or maintenance work. A business owner would carefully consider the cost effectiveness of this type of advertising before doing it. Distribution of attractive brochures describing your service is another way of advertising.

Any business will probably use a mix of these advertising approaches. A new business may start with a large advertising budget to attract new customers. An established business may depend more on referrals and repeat customers. A business often will ask customers how they heard of the business to find out if its advertising is actually attracting new customers.

Often a company will project an image through its advertising. The image may stress low price, good service, or quality work. Different images will appeal to different customers.

Selling and Customer Relations

Once you have attracted customers, you must "sell" them on using your service. These are ways to do this.

- How the customer is treated--Are their questions answered, and are they provided with the information they need?
- The truck--Is it neat or messy?
- The appearance of the plumbers--Do they wear a uniform or other appropriate clothes?
- The behavior of the plumbers--Are they confident and competent? Are they courteous? Do they come when scheduled?
- The quality of the work--Is the work done to the customer's satisfaction?

Customers also form an impression about a business through its written communications.

- The appearance of the bid--Is it well organized, specific, clearly written, and neatly typed on good quality stationery?
- The business card--Is it attractively designed, and does it present the image you want?

Every contact the customer has with the business influences his or her impression. This begins with the initial telephone call. It continues until the work is completed and the final contact is made.

Summary

To have a successful plumbing business, you must attract customers and demonstrate that you can provide them with the service they want. The strategy you use in planning your advertising depends on the service you provide, whom you want to reach, and how much you can spend. Every contact you have with customers contributes to their impression of your business.

Learning Activities

Individual Activities

1. List five ways to advertise for a plumbing business.

2. Look in the Yellow Pages of the telephone book under "Plumbing." List any subcategories such as "Contractors" or "Drain and Sewer Cleaning." Write down the name of a business that emphasizes each of these: drains unplugged, home repair work, remodeling, or construction.

3. Look in the classified section of a newpaper for listings under plumbing. Bring the listings you find to class. Also look for display ads in a newspaper.

4. Select a name for a plumbing service and explain the advantages of the name.

Discussion Questions

1. Give a good way to advertise each of these services: home maintenance and repair work, new construction work, and home remodeling work.

2. Discuss the statement, "Our service people are our best sales people."

3. A plumber specializing in drain unplugging has a yearly budget of $1,000 for advertising. He has the following choices for an ad in the Yellow Pages. What size Yellow Pages ad do you think he should buy? What other kind of advertising should he do?

- Short listing - $100/year
- Medium-size display ad - $500/year
- Large display ad - $1,000/year

Group Activity

Prepare a simple ad for a plumbing business to appear in the Yellow Pages. Include the name, telephone number, and other information you feel is appropriate and would appeal to your customers. Share your ad with the group and explain why you designed it as you did.

UNIT 8

Keeping Financial Records

Goal: To help you learn to keep financial records for your plumbing business.

Objective 1: Fill out a customer account form for the services performed for a customer.

Objective 2: Fill out a daily cash sheet for money received and paid out in one day.

WALT KEEPS TRACK OF FINANCES

Walt set up a recordkeeping system when he first started working independently. He had a file system and a way to keep track of the money he spent. But Walt found that he tended to put off doing the recordkeeping. He would put things in the "To Be Filed" box. He wouldn't get to them for several weeks.

After he was in business for about six months, Walt found that although he had work, he was short of cash. Because of the way his system was set up, it was difficult to tell how much he needed to charge to cover overhead expenses. He needed better records to see how much money he had. They also would help him to anticipate when he would need to buy parts and when he would get paid for jobs.

Walt met with an accountant. The accountant helped him set up an improved recordkeeping system. It provided Walt with the information he needed for his planning and decision making.

Walt decided he needed to place more importance on keeping records. He says, "It really doesn't take very long to do the records once I sit down and do it. I don't want to take time during the day when I can be doing other things. I'll set aside Tuesday evening from 7 to 9:30 as the time to do my records. If I don't get caught up, I'll work Thursday evening. That way I can keep my records current."

Walt also decided he wanted to understand accounting and tax laws better. He learned a lot from talking to his accountant and other contractors. He also read about recordkeeping. And he took a class on basic accounting through a local college.

Keeping Financial Records

As a business owner, you must have a clear way to keep track of your money. Different businesses have different recordkeeping needs and methods. This unit discusses the importance of keeping financial records. It also gives two examples of the type of records that might be kept.

Importance of Financial Records

Often people starting a plumbing business know their trade but do not have much knowledge in the area of bookkeeping and accounting. An owner does not need to do the bookkeeping. But he or she should thoroughly understand the system and be able to use it to get the information needed to plan and make decisions.

The purposes of keeping financial records include:

- making business decisions and plans;
- keeping track of revenues (money coming in);
- keeping track of expenses (money going out);
- preparing taxes and other business reports;
- seeing what each job costs;
- comparing actual costs with estimates and bids;
- anticipating cash shortages; and
- determining profits.

You have already learned about the work order. It shows costs on a specific job. This unit discusses two other types of records--a customer account form and a daily cash sheet. Other records might include pay roll records, income tax records, and records grouped by type of expense. These records are periodically summarized and organized into forms that

show how the business is doing. These include forms such as balance sheets and profit/loss statements.

Customer Billing

Some plumbing businesses do the work and then later send a bill. Others have the customer pay at the time the work is done, particularly for repair work and small jobs. For large jobs there is often an agreed on progress billing schedule for the customer to pay a certain percentage of the cost when a certain percentage of the work is complete. The customer may not pay a small percentage of the bill until he or she knows the system is in good working order.

Sometimes a business owner extends credit to good customers in order to get their business and must wait for their payment. Meanwhile, the owner needs cash to pay workers and for other expenses. This type of credit is of particular concern in new construction. For a large job a plumber will usually file a lien on the property. This puts a claim on the property if the work is not paid for. The business owner should send out bills promptly to encourage the customer to pay as soon as possible.

A customer account form is kept in the office. It shows how much a credit customer owes the business. On the next page is an example of a customer account form that could be used in an office.

CUSTOMER ACCOUNT FORM

Customer: Lawson Construction Co., 88 S. 10th St., Haven, Ill.

Date	Description of Sale	Amount Charged	Payment Received	Balance Due
7/1	1st Installment, Job 301	$ 500.00		$ 500.00
8/1	2nd Installment, Job 301	500.00		1,000.00
8/15	Payment		$1,000.00	---
11/1	3rd Installment, Job 301	$2,500.00		$2,500.00

The Lawson Construction Company was billed $500.00 for the first installment and $500.00 for the second installment on a job, for a total of $1,000 balance due. The Lawson company paid this on August 15. It no longer had a balance due. Later it was billed $2,500.00 for the third installment. This is shown here as the balance due.

Daily Cash Sheet

A daily cash sheet such as the one on the next page can be used to keep track of the money coming in and going out of a business each day. This form is only a sample. The system used will depend on the specific business.

DAILY CASH SHEET			
Cash Receipts		Cash Payments	
Cash Sales	$450.00	Salaries	_____
Collection on		Building Expenses	$500.00
Credit Sales	$_____	Equipment & Furniture	_____
		Inventory or Supplies	_____
		Advertising	_____
		Other	_____
TOTAL CASH RECEIPTS	$450.00	TOTAL CASH PAYMENTS	$500.00

In the sample, for a particular day there were $450.00 in cash receipts and $500.00 in cash payments. These and other daily records are periodically summarized into forms that show how the business is doing, such as a balance sheet and a profit/loss statement. You will learn about profit/loss statements in the next unit. If you do go into business for yourself, get the advice of a bookkeeper or accountant about how to complete a balance sheet.

Summary

Keeping careful financial records can be key to the success of a business. Often plumbers going into business for themselves must learn about how to keep and use financial information. The specific forms and systems used should be designed to meet the needs of the particular business.

Learning Activities

Individual Activities

1. List four reasons for keeping careful financial records.

2. Complete this customer account form for Allen Wong using the information below.

Date	Description	Amount
1/15	Drain Unplugged	$30.00
1/25	Check Received	30.00
3/4	Repair garbage disposal	35.00
4/4	Replace garbage disposal	126.00

CUSTOMER ACCOUNT FORM

Customer: _____

Date	Description of Sale	Amount Charged	Payment Received	Balance Due

3. Complete this daily cash sheet using the information below regarding cash transactions on one day.

Transaction	Amount
Advertising in Yellow Pages	$ 100.00
Insurance Payment	85.00
Collection on credit sales	550.00
Salaries	1,500.00

DAILY CASH SHEET	
Cash Receipts	Cash Payments
Cash Sales $_____	Salaries $_____
Collection on Credit Sales _____	Building Expenses _____
	Equipment & Furniture _____
	Inventory or Supplies _____
	Advertising _____
	Other _____
TOTAL CASH RECEIPTS $_____	TOTAL CASH PAYMENTS $_____

4. Explain the term "progress billing."

5. How could an adult in your local community get training in accounting or bookkeeping?

Discussion Questions

1. Do you think it is better for the owner of a small business to keep all the financial records or to hire someone else to do it? Discuss.

2. Give examples of when you would want a customer to pay in cash. Give examples of when you would extend credit.

3. Fred Gonzales has done some plumbing repair work for a local restaurant. The restaurant now has a balance due of $75.00 that is two months overdue. Fred sent a reminder notice after one month. What do you think Fred should do?

Group Activity

In a group, make a list of the types of decisions Walt needs to make in his business in which it would be helpful to have information from financial records.

UNIT 9

Keeping Your Plumbing Business Successful

Goal: To help you learn how to keep a plumbing business successful.

Objective 1: Figure out the net profit, profit ratio, and expense ratio for this business.

Objective 2: State one way this business could increase its profits.

Objective 3: State one way this business could change its services to increase sales.

WALT CHECKS HIS COMPANY'S HEALTH

Walt has been in business for five years now. There have been changes in his business over the years. Walt describes some of these changes.

"During the third year in business, I got some contracts to do small tract developments. I liked having steady work I could depend on over a longer period of time. I hired extra help, and things went well for about a year. At the end of Year 3, I began having difficulty finding good workers. I ended up spending much of my time directing and supervising others. I found I didn't like supervising as well as doing the plumbing work myself."

Walt decided to change his business. There was a lot of new building going on, so he decided to stay in new construction work. However, he decided to lay off all his workers but one. "I'll only take jobs that the two of us can handle. But I think that we can handle quite a few of the jobs that are up for grabs right now."

After a few months Walt decided that he liked his current rate of business. He says, "I like working at the level I'm at now. I could probably get more work and hire more help. But that would increase my expenses. I would need to do more supervising, too. I like being small. I can keep my expenses down and make a good living doing work I like. Next year I am going to concentrate on selling more custom plumbing jobs in new homes. I earn a higher percentage of profit on these jobs."

Keeping Your Business Successful

A business must make a profit to continue. Profit is one way of evaluating the success of a business. However, there are other personal satisfactions for some people in running their own businesses. This section discusses personal satisfaction, ways to increase profits, and using a profit/loss statement.

Profit and Personal Satisfaction

Many people start a small business hoping to make more money than they did working for someone else. They take a risk by going on their own. Some people make much more money. Some make about the same. Others make less than what they could make working for someone else. Different people are satisfied making different amounts of money from their business. For some people, personal satisfaction is more important than profit.

There are other considerations to being a small business owner. Some people like working for themselves. They may enjoy the independence, the challenge, or being able to make the decisions. They are usually persistent, hard working, and motivated. Other people don't like the work, even when their business is profitable. They may not like the worries, responsibility, the long hours, or having to make so many decisions. So operating a small business is certainly not right for everyone.

Profit/Loss Statement

A profit/loss statement shows revenues, cost of goods sold, gross profit, expenses, and net profit during a certain period of time. This information can be helpful in determining how a business is doing and in deciding what changes might be made. Cost of goods sold refers to the parts and materials that were used in plumbing work during the year.

A profit ratio and an expense ratio can be figured from the information on the profit/loss statement. They show the percentage of profit and expenses to sales. They are useful in comparing the performance of a business from year to year. They are computed as follows:

$$\text{Profit Ratio} = \frac{\text{Net Profit}}{\text{Revenues}}$$

$$\text{Expense Ratio} = \frac{\text{Expenses}}{\text{Revenues}}$$

Following is Walt's profit/loss statement for years three and four.

TWO-YEAR PROFIT/LOSS STATEMENT

	Year 3		Year 4	
	$	%	$	%
Revenues	$250,000	100%	$187,500	100%
Cost of Goods Sold	150,000	60%	$112,500	60%
Gross Profit	$100,000		$ 75,000	
Expenses				
Salaries	37,800		17,250	
Depreciation and Repair of Equipment	3,000		3,200	
Gasoline	2,200		1,500	
Office Supplies	1,000		800	
Advertising	1,500		1,000	
Other	4,500		2,500	
TOTAL	$50,000	20%	$26,250	14%
Net Profit (before owner's salary)	$50,000	20%	$48,750	26%

Often plumbers do not include their salary in the net profit. Then their reported profit as a percentage of sales is much lower.

In analyzing the profit/loss statement, you can see that Walt had less revenues and profit in Year 4. He also had less expenses, so his percentage of profit was higher.

	Year 3	Year 4
Expense Ratio	20%	14%
Profit Ratio	20%	26%

How to Increase Profits

Although Walt was now happy with the basic size of his business, he did want to raise his profit a little in Year 5. Business owners can increase profits by increasing revenues and by decreasing expenses. It sounds easy, but it is often difficult to do! Some ways to increase revenues include:

- raising prices;
- getting more customers;
- working more efficiently and getting more work done;
- providing different services; or
- specializing in the more profitable services.

Some ways to decrease expenses include:

- having a smaller inventory of parts and materials;
- improving office procedures;
- reducing waste; and
- cutting down on employees.

Sometimes it is difficult to reduce expenses without also reducing services provided. This may lead to a loss of revenues. Making business decisions requires good judgment.

Summary

A company must make a profit to stay in business. A profit/loss statment shows the owner how much profit there is. It can be used to decide on areas where improvement can be made. Personal satisfaction, as well as profit, is important to the small business owner.

Learning Activities

Individual Activities

1. Give the equation for an expense ratio and a profit ratio. Explain why they are useful.

2. In Year 5 Walt had revenues of $200,000. His parts and materials cost him $118,000. His expenses were $28,000. What was the net profit, the expense ratio, and profit ratio? Did Walt do better or worse than in Years 3 and 4?

3. List three reasons why revenues for a plumbing business might go down.

4. List three ways to increase revenues.

5. List three ways to reduce costs.

Discussion Questions

1. Suppose that a journeyman plumber in Walt's area earns about $30,000 a year. Which of these amounts do you think Walt should earn, and why?

   ___ a. $25,000
   ___ b. $30,000
   ___ c. $40,000
   ___ d. Over $40,000

2. Which of these types of work would you like to do if you were a small business owner, and why?

___ a. New construction

___ b. Remodeling

___ c. Repairs

___ d. Commercial property

___ e. Residential property

3. What personal satisfaction might you get from having your own business?

Group Activity

Imagine that your group is going to start its own plumbing business. What kind of business would your group like to run? Write a description including the following.

- Name of the business
- Services
- Customers
- Location
- Number of employees
- Why you think you can compete

SUMMARY

This module has been about owning a small plumbing business. There are also large companies with many employees that do large-scale commercial construction, residential tract housing, and other large jobs. They may offer a range of services. Such companies sometimes started small and expanded or had large amounts of money to invest in the beginning to get started.

Starting your own plumbing business can be a rewarding challenge. Many people like working for themselves and being their own boss. They also like the fact that their efforts will be rewarded financially. They get both personal satisfaction and the possibility of more income by running their own business.

In order to own and operate a successful plumbing business, you need training as a plumber, work experience, and the special business management skills we have covered in this module. If you have not had a course in plumbing, you should take one before deciding to own a plumbing business. You can learn business management skills through business classes, experience, or by using the advice and example of an expert.

Operating a small business is not appropriate for everyone. It takes hard work and can be risky. Many people prefer to work as an employee and to leave the details of managing the business to someone else. You may not make a lot of money by owning a plumbing business. However, you

would have the personal satisfaction of being responsible for your business and making your own decisions. Think about how important these things are to you in considering if you might like to start your own plumbing business.

QUIZ

1. The least likely customer of a small plumbing business would be:

   ___ a. a home owner.
   ___ b. an apartment owner.
   ___ c. a general contractor.
   ___ d. the manager of a large factory.

2. List three helpful personal qualities of the owner of a plumbing business.

   a. _____
   b. _____
   c. _____

3. List two ways to help a plumbing business compete successfully.

   a. _____
   b. _____

4. The legal requirements to operate a small plumbing business may include:

   ___ a. passing a state test.
   ___ b. having a business license.
   ___ c. having a certain number of years of experience.
   ___ d. all of the above.

5. List two things to think about in deciding in what area to locate your business.

   a. _____
   b. _____

6. Which location seems best for a large plumbing business?

___ a. A home

___ b. A place where many people walk by

___ c. A shop and office in a commercial area

___ d. A space in an office building

7. List the three parts of a business description.

a. _____

b. _____

c. _____

8. Casey Harris plans on starting a small plumbing repair service. She has $10,000 she can spend. She estimates that her expenses will be $15,000. Fill out the form below using this information.

_____

Total Starting Expenses _____

Total Money on Hand _____

Total Loan Money Needed _____

_____

9. Of these people, who would be most likely to decide about hiring a new employee?

___ a. The owner

___ b. The foreman on a job

___ c. A journeyman mechanic

___ d. The office worker

10. What kind of experience would you look for in a person you wanted to hire for "new construction" plumbing work?

___ a. Seven years of experience in sheet metal work, four years of experience as a foreman

___ b. Seven years of experience in plumbing repair work

___ c. Four years of experience in new construction plumbing, some experience as a foreman

11. List three ways to keep your employees satisfied.

a. _____

b. _____

c. _____

12. Ron installed a 100-gallon waterheater. It took $600 in parts and three hours of labor at $36 per hour. Fill out the form below using this information.

_____

Total Materials	_____
Total Labor	_____
Tax (6% of Materials)	_____
TOTAL COST	_____

_____

13. Which of these jobs would you schedule first on a given day?

___ a. A maintenance contract job

___ b. Fix a leaky faucet

___ c. A plumbing emergency call from a major customer

___ d. A request for an estimate on a remodeling job

14. A job will cost $200 for parts and $250 for operating expenses. The contractor wants to make a 10% profit. How much should he or she bid for the job?

___ a. $450
___ b. $500
___ c. $550

15. Which of these would be the best way for a business doing emergency plumbing repair work to advertise?

___ a. Business cards
___ b. Newspaper
___ c. Radio
___ d. Yellow Pages in the phone book

16. List the two most important things to include in an ad.

a. _____
b. _____

17. Molly McPherson had a fixture replaced for $200. She has paid $150. What would be the balance due on her customer account form?

_____

18. Michaletti's Plumbing Company had the following cash receipts and cash payments in one day: cash sales of $521.00; purchase of inventory for $700; and collection on credit sales of $129.00. What were the total cash receipts and total cash payments for the day?

Receipts: $_____ Payments: $_____

19. In one year a business had $100,000 in revenues and $25,000 in expenses. Cost of goods sold was $60,000. Fill in the blanks.

a. Net Profit = _____
b. Profit Ratio = _____
c. Expense Ratio = _____

20. List the two main things a business can do to increase profits.

a. _____

b. _____

21. List two things a plumbing business can do to increase sales.

a. _____

b. _____

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PROJECT PRODUCTS

Entrepreneurship Training Components

Vocational Discipline	Module Number and Title
General	Module 1 - Getting Down to Business: What's It All About?
Agriculture	Module 2 - Farm Equipment Repair
	Module 3 - Tree Service
	Module 4 - Garden Center
	Module 5 - Fertilizer and Pesticide Service
	Module 6 - Dairy Farming
Marketing and Distribution	Module 7 - Apparel Store
	Module 8 - Specialty Food Store
	Module 9 - Travel Agency
	Module 10 - Bicycle Store
	Module 11 - Flower and Plant Store
	Module 12 - Business and Personal Service
	Module 13 - Innkeeping
Health	Module 14 - Nursing Service
	Module 15 - Wheelchair Transportation Service
	Module 16 - Health Spa
Business and Office	Module 17 - Answering Service
	Module 18 - Secretarial Service
	Module 19 - Bookkeeping Service
	Module 20 - Software Design Company
	Module 21 - Word Processing Service
Occupational Home Economics	Module 22 - Restaurant Business
	Module 23 - Day Care Center
	Module 24 - Housecleaning Service
	Module 25 - Sewing Service
	Module 26 - Home Attendant Service
Technical	Module 27 - Guard Service
	Module 28 - Pest Control Service
	Module 29 - Energy Specialist Service
Trades and Industry	Module 30 - Hair Styling Shop
	Module 31 - Auto Repair Shop
	Module 32 - Welding Business
	Module 33 - Construction Electrician Business
	Module 34 - Carpentry Business
	Module 35 - Plumbing Business
	Module 36 - Air Conditioning and Heating Service

Related Resources

Resource Guide of Existing Entrepreneurship Materials

Handbook on Utilization of the Entrepreneurship Training Components